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Overdrafted Groundwater Basins Compared to Overdrafted Watersheds by Alex Hildebrand

There is a lot of misunderstanding about what constitutes "surplus water". it is generally understood that there is no surplus water in an overdrafted groundwater basin. It is overdrafted if the long term trend is one of depletion even if wet years provide partial intermittent replenishment. Exports of water by the owner of a well in such a basin are understood, therefore, to have serious third party and social impacts.

There is less understanding of the fact that exports and changes in purpose of use in an overcommitted watershed also cause inevitable third party impacts. Owners of diversion and storage facilities, like owners of a deep well, can often capture more water than they need for beneficial use on their own lands. When the entire watershed has surplus water there is no reason why a diverter should not sell the water he can control beyond what is needed on his own lands. In the Central Valley watershed, however, the entire yield of the watershed is already being beneficially used much of the time. Consequently, there are inevitably third parties who will be deprived of water if water is sold. This is true regardless of drawdown and replenishment of water storage. Unless stored water would spill all the way to the Bay in excess of outflow requirements if not sold, there is no "surplus" water. In the absence of this condition a sale results in a realiocation either in purpose of use, place of use, or time of use. This reallocation of water may or may not be in the broad social interest. It also may or may not be legal, depending on whether the seller has rights superior to the parties that lose water. However, the analysis of such a transfer must not ignore the fact that there will be water losers. Water transferred from an overcommitted watershed is not surplus in terms of overall water use any more than water transferred from an overdrafted groundwater basin. Such transfers inevitably involve winners and losers.